

CLAIMS:

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5 1. A receiver for receiving broadcast digital television signals representing both image data and information data, the receiver being responsive to the information data to output for display data derived from said image data and said information data and representing an interactive image, and being responsive to viewer manipulation of an input device to vary the interactive image and to establish a telecommunications link to a remote site for on-line interaction via the interactive image between the viewer and the remote site.

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15 2. A receiver as claimed in claim 1, comprising a decoder for separating the image data and the information data, a store for storing information data and a processor responsive to the stored information data.

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20 3. A receiver as claimed in claim 2, wherein the processor is arranged to execute programs contained within the information data.

4. A receiver as claimed in claim 3, wherein the processor is arranged to respond to said viewer manipulation of the input device in accordance with

instructions included in said program data.

A. 5. A receiver as claimed in ~~any of claims 2 to 4~~,  
wherein the stored information data comprises template  
data and the processor is arranged to construct the  
5 data representing the interactive image from received  
information data and the stored template data.

10 6. A receiver as claimed in ~~any of claims 2 to 5~~,  
wherein the image data comprises video image data and  
the decoder is arranged to convert said image data  
into data representing a video image for display in  
the interactive image.

7. A receiver as claimed in ~~any preceding claim~~<sup>1</sup>  
wherein the input device comprises a remote control  
unit.

15 8. A receiver as claimed in ~~any preceding claim~~<sup>1</sup>,  
wherein the input device comprises a keypad.

A 9. A receiver as claimed in ~~any of claims 2 to 8~~,  
further comprising a modem for establishing a  
telecommunications link.

20 8w E3 10. A receiver as claimed in claim 9, wherein the  
processor is responsive to on-line data received via

the modem.

11. A receiver as claimed in claim 10, wherein the store is adapted to store on-line data.

12. A receiver as claimed in claim 10 or 11, wherein the processor is arranged to execute programs contained within the on-line data.

13. A receiver as claimed in claim 12, wherein the processor is arranged to respond to said viewer manipulation of the input device in accordance with instructions included in said program data.

14. A receiver as claimed <sup>in claim 2</sup> in any preceding claim, wherein the interactive image comprises plural interactive screens so formed as to be individually displayable.

15. A receiver as claimed in <sup>claim 65</sup> ~~claim 14 as dependent on claim 5~~, wherein the processor is arranged to derive data representing each of the interactive screens from the template data and the received information data.

16. A receiver as claimed in <sup>claim 66</sup> ~~claim 14 or 15 as dependent on claim 10~~, wherein the processor is arranged to derive data representing an interactive

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screen from the on-line data.

17. A receiver as claimed in ~~any of claims 14 to 16~~,  
wherein the processor is arranged to display the  
interactive screens in a hierarchical order in  
5 response to viewer manipulation of the input device.

*Sub B2* 18. A receiver as claimed in ~~any of claims 14 to 17~~,  
wherein the processor is arranged to derive data  
representing one of the interactive screens from data  
defining an interactive picture larger in size than  
10 the interactive screen.

19. A receiver as claimed in claim 18, wherein the  
processor is arranged to derive the interactive screen  
data as representing a portion of the interactive  
picture.

15 20. A receiver as claimed in claim 19, wherein the  
processor is arranged to respond to viewer  
manipulation of the input device by moving the portion  
over the interactive picture.

20 21. A receiver as claimed in claim 20, wherein the  
processor is arranged to move the portion in a step-  
wise manner.

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22. A receiver as claimed in claim 20, wherein the processor is arranged to scroll the portion over the interactive picture.

23. A receiver as claimed in ~~any preceding claim~~<sup>1</sup>, comprising a first card reader for reading a subscriber card authorising access to broadcast signals and a second card reader for reading another card.

24. A receiver as claimed in claim 23, wherein the second card reader is adapted to read a card issued by a financial institution.

25. A receiver as claimed in claim 23 ~~or 24~~, wherein the second card reader is adapted to read a magnetic-strip card.

26. A receiver as claimed in claim 23 ~~or 24~~, wherein the second card reader is adapted to read a smart card.

27. A receiver as claimed in claim 23 ~~or 24~~, wherein the second card reader is adapted to read a cash value card.

28. A method of interacting with broadcast

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interactive services, the method comprising receiving signals representing both image data and information data, deriving from the data in the received signals an interactive image for display, responding to manipulation of an input device by varying the interactive image, and establishing a telecommunications link to a remote site for on-line transfer of data therewith in response to the manipulation of the input device.

29. A method as claimed in claim 28, wherein the information data comprises program data, the method further comprising executing the program defined by the program data.

30. A method as claimed in claim 29, further comprising responding to the manipulation of the input device in accordance with instructions included in said program data.

31. A method as claimed in ~~any of claims 28 to 30~~, wherein the information data comprises template data, the method further comprising constructing data representing the interactive image from received information data and the template data.

32. A method as claimed in ~~any of claims 28 to 31~~,

further comprising converting the image data into data representing a video image display in the interactive image.

A 33. A method as claimed in ~~any of claims 28 to 32~~,  
5 further comprising displaying the interactive image.

A 34. A method as claimed in ~~any of claims 28 to 33~~,  
further comprising establishing a telecommunications link for transmitting data to and receiving on-line data from a remote site.

10 35. A method as claimed in claim 34, wherein the on-line data comprises program data defining a program, the method further comprising executing the program defined by the program data.

15 36. A method as claimed in claim 35, further comprising responding to said manipulation of the input device in accordance with instructions included in said program data.

A 37. A method as claimed in ~~any of claims 28 to 36~~,  
20 wherein the interactive image comprises plural interactive screens so formed as to be individually displayable.

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38. A method as claimed in ~~claim 37 as dependent on claim 31~~, wherein the interactive screens are formed depending on the template data and the received information data.

claim 68

5 39. A method as claimed in ~~claim 38 as dependent on claim 33~~, wherein the interactive screens are formed depending on the on-line data.

10 40. A method as claimed in ~~any of claims 37 to 39~~, wherein the interactive screens are displayed in a hierarchical order in response to manipulation of the input device.

15 41. A method as claimed in ~~any of claims 37 to 40~~, further comprising deriving data representing one of the interactive screens from data defining an interactive picture larger in size than the interactive screen.

42. A method as claimed in claim 41, further comprising deriving the interactive screen data as representing a portion of the interactive picture.

20 43. A method as claimed in claim 42, further comprising moving the portion over the interactive

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picture in response to manipulation of the input device.

44. A method as claimed in claim 43, wherein the portion is moved in a step-wise manner.

5 45. A method as claimed in claim 43, wherein the portion is scrolled over the interactive picture.

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10 46. An interactive services interface comprising:  
a broadcast entry level for enabling a user to select from a range of available service types;  
a first broadcast interactive level, entered by user selection of a service type in the entry level, for enabling the user to select from a group of service providers of the selected type;  
a second broadcast interactive level, entered by  
15 user selection of a service provider in the first broadcast interactive level, for enabling the user to select from a range of classes of goods and/or services available from the selected service provider;  
and  
20 a third broadcast interactive level, entered by user selection of a class of goods and/or services, for enabling the user to select goods and/or services from the selected class.

47. An interactive services interface as claimed in claim 46, further comprising a first on-line interactive level entered from one of the three broadcast interactive levels for establishing an on-line connection with a remote site and for enabling the user to place an order for the selected goods and/or services with the remote site.

48. An interactive services interface as claimed in claim 47, further comprising a second on-line interactive level, entered by placing an order for the selected goods and/or services, for enabling the user to complete the order with the remote site.

49. An interactive services interface as claimed in claim 48, further comprising a third on-line interactive level, entered by completing the order, for enabling the remote site to confirm acceptance of the order with the user.

50. An interactive services interface as claimed in ~~any of claims 46 to 49~~, further comprising a respective interactive screen for each of the first, second and third broadcast interactive levels.

51. An interactive services interface as claimed in claim 50, wherein the broadcast screen data comprises

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template data defining the form of the broadcast  
interactive screens, which template data is broadcast  
infrequently; and respective information data for each  
interactive screen, which information data is  
5 broadcast substantially continuously.

52. An interactive services interface as claimed in  
claim 49, ~~or claim 50 or 51~~ as dependent thereon,  
further comprising a respective interactive screen for  
each of the first, second and third on-line  
10 interactive levels.

53. An interactive services interface as claimed in  
claim 52, wherein each of the on-line interactive  
screens is defined by data comprising broadcast  
template data and on-line information data.

15 <sup>Sub</sup>  
B5 54. An interactive services interface as claimed in  
~~any of claims 46 to 53~~, further comprising another  
broadcast entry level for enabling a user to enter  
directly a predetermined one of the first, second and  
third broadcast interactive levels or a predetermined  
20 one of the first, second and third on-line interactive  
levels.

55. An interactive services interface as claimed in  
~~any of claims 46 to 54~~ wherein each broadcast and on-

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line interactive level is displayable on a display screen.

56. An interactive services interface as claimed in claim 55, wherein at least one of the broadcast and on-line interactive levels is larger than the display screen and only a portion of the interactive level is displayable at a given time on the display screen.

57. A receiver for broadcast signals, the receiver comprising an interactive services interface as claimed in ~~any of claims 46 to 56.~~

58. A receiver as claimed in claim 57, further comprising a modem for transmitting and receiving of on-line signals.

59. A receiver as claimed in ~~any of claims 1 to 27,~~ wherein the interactive image comprises a constant background image and a changeable preview picture, the background image comprising a portion having a subject that corresponds with the subject of the background of the preview picture so that the background and the preview picture appear to form a single continuous interactive image.

60. A receiver as claimed in claim 59, wherein the

interactive image comprises a changeable graphic overlay having a portion containing a subject that corresponds with the subject of the background and/or the preview picture so that the graphic overlay and the background picture and/or the preview picture appear to form a single continuous interactive image.

61. A receiver for receiving television signals in a plurality of channels, each signal comprising video data defining a television programme and programme scheduling data defining the scheduling of programmes in the plurality of channels, the receiver being arranged to produce from received programme scheduling data output signals defining for display an image of a list of present programmes in the plurality of channels, the receiver comprising a user operable selector operable to select from the list when displayed one of the present programmes and being responsive to such selection by receiving the video data for the selected present programme and combining the video data with the output signals so that the output signals define an image of the selected present programme in combination with the image of the list of the present programmes.

62. A receiver for receiving television signals in a plurality of channels each defining a television

programme, the receiver comprising a processor adapted to generate output signals for display of an image representing a list of <sup>channels</sup> ~~programmes~~ receivable by the receiver, the receiver comprising a user operable selector operable to select from the list channels for which no information will normally be displayable by the receiver.

63. A receiver for receiving television signals in a plurality of channels each defining a television programme, the receiver comprising a processor adapted to generate output signals for display of an image representing an ordered list of channels receivable by the receiver, the receiver comprising a user operable selector operable to select the order in which channels are listed in the list.

64. A receiver as claimed in claim 63, wherein the processor is adapted to generate output signals representing a selected one of a plurality of predefined images representing programme and/or channel listings, and is arranged to respond to re-ordering of the list of receivable channels by correspondingly re-ordering programme and/or channel listings in other ones of the predefined images.

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